

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1 1. (Previously Presented) A method of data processing
2 comprising:

3 connecting a plurality of data processing nodes in a peer-to-
4 peer relationship, thereby enabling each data processing node to
5 receive data packets from adjacent input connected nodes and to
6 transmit data packets to adjacent output connected nodes;

7 at each data processing node examining data packets received
8 from adjacent input connected nodes and selectively routing the
9 received data packet to the current data processing node, routing
10 to an adjacent output connected node or both, whereby any data
11 processing node can transmit a data packet to any destination data
12 processing node for forwarding by other data processing nodes to
13 the destination data processing node;

14 at each data processing node responding to a receipt
15 confirmation data packet received from a source data processing
16 node by transmitting an acknowledge data packet to the source data
17 processing node transmitting that receipt confirmation data packet;
18 and

19 at least one supervisory data processing node periodically
20 transmitting a receipt acknowledge data packet to each other data
21 processing node and determining a data processing node has failed
22 upon failure to receive an acknowledge data packet from the data
23 processing node in response to a receipt confirmation data packet.

1 2. (Previously Presented) The method of data processing of
2 claim 1, further comprising the steps of:

3 storing health data at each data processing node concerning
4 the current health operating status of that data processing node;
5 and
6 wherein said step of responding to a receipt confirmation data
7 packet includes transmitting an acknowledge data packet including
8 the stored health data.

3. (Canceled)

1 4. (Previously Presented) The method of data processing of
2 claim 1, further comprising:
3 at each data processing node storing a unique node ID;
4 at each data processing node storing an indication of node IDs
5 corresponding to each adjacent output connected node;
6 said step of selectively routing the data packet includes
7 routing the received data packet to the current data
8 processing node if a header of the data packet includes the
9 node ID of the data processing node,
10 routing the received data packet to an adjacent output
11 connected node if the header of the data packet includes a
12 node ID matching the corresponding stored indication of node
13 IDs for the adjacent output connected node, and
14 not routing the received data packet to the current data
15 processing node or to any adjacent output connected node if
16 the header of the data packet includes a node ID not matching
17 the node ID of the data processing node or the stored
18 indication of node IDs for any adjacent output connected node.

5. (Canceled)

1 6. (Previously Presented) The method of data processing of
2 claim 1, wherein each data processing node includes a CPU core and

3 a bridge circuit connected to the CPU core, the adjacent input
4 connected nodes and the adjacent output connected nodes, said
5 method further comprising the steps of:

6 at each data processing node employing a program running on
7 the CPU core to periodically reset a timer in the bridge circuit
8 and using the bridge circuit to not route any received data packet
9 to the current data processing node or to any adjacent output
10 connected node upon expiration of a time of the timer, whereby a
11 data processing node having a failed CPU core absorbs all received
12 data packets.

1 7. (Previously Presented) A method of data processing
2 comprising:

3 connecting a plurality of data processing nodes in a peer-to-
4 peer relationship, thereby enabling each data processing node to
5 receive data packets from adjacent input connected nodes via input
6 ports and to transmit data packets to adjacent output connected
7 nodes via output ports;

8 at each data processing node storing a unique node ID;

9 at each data processing node storing for each output port an
10 indication of a set of node IDs to be reached via that output port;

11 at each data processing node examining data packets received
12 from adjacent input connected nodes and selectively routing the
13 data packet including

14 routing the received data packet to the current data
15 processing node if a header of the received data packet
16 includes the node ID of the data processing node,

17 routing the received data packet to an output port if the
18 header of the received data packet includes a node ID within
19 the corresponding stored indication of node IDs for that
20 output port;

21 at each data processing node responding to a receipt
22 confirmation data packet received from a source data processing
23 node by transmitting an acknowledge data packet to the source data
24 processing node transmitting the receipt confirmation data packet;
25 and

26 at least one supervisory data processing node periodically
27 transmitting a receipt acknowledge data packet to each other data
28 processing node and determining a data processing node has failed
29 upon failure to receive an acknowledge data packet from the data
30 processing node in response to a receipt confirmation data packet.

1 8. (Previously Presented) The method of data processing of
2 claim 7, further comprising the steps of:

3 storing health data at each data processing node concerning
4 that current health operating status of the data processing node;
5 and

6 wherein said step of responding to a receipt confirmation data
7 packet includes transmitting an acknowledge data packet including
8 the stored health data.

1 9. (Previously Presented) The method of data processing of
2 claim 7, further comprising:

3 said step of selectively routing the data packet includes not
4 routing the received data packet to the current data processing
5 node or to any output port if the header of the data packet
6 includes a node ID not matching the node ID of the data processing
7 node or the stored indication of node IDs for any output port.

1 10. (Previously Presented) The method of data processing of
2 claim 7, wherein each data processing node includes a CPU core and
3 a bridge circuit connected to the CPU core, the adjacent input

4 connected nodes and the adjacent output connected nodes, said
5 method further comprising the steps of:
6 at each data processing node employing a program running on
7 the CPU core to periodically reset a timer in the bridge circuit
8 and using the bridge circuit to not route any received data packet
9 to the current data processing node or to any adjacent output
10 connected node upon expiration of a time of the timer, whereby a
11 data processing node having a failed CPU core absorbs all received
12 data packets.